

## Economic Impact of Gaining or Losing 100 Jobs: 2003

The value of a job to Kentucky's economy varies meaningfully by industry within the state. Jobs, which are based on significant capital investment, have a tendency to create the greatest values for the state's economy. These capital-intensive jobs (*i.e.*, utilities, coal mining, steel production, and motor vehicle production) also command above average salaries and significant benefits for those employed in these industries. Jobs requiring less human capital and physical capital have a tendency to create less economic value for the state's economy. These jobs have a propensity to occur in employment areas located in retail sales, agriculture, and some of the lower skilled manufacturing and construction areas. Lower salary levels generally correspond with these categories of employment.

### Estimated Value Added: 2003 Economic Impact of Adding 100 New Jobs in Kentucky

Industrial Sector	Direct	Indirect	Induced	Total
Accommodation and Food Services	\$2,161,000	\$903,000	\$1,276,000	\$4,339,000
Agriculture, Forestry, Fishing, and Hunting	\$1,412,000	\$877,000	\$793,000	\$3,082,000
Arts, Entertainment, and Recreation	\$2,398,000	\$556,000	\$1,322,000	\$4,276,000
Construction	\$4,243,000	\$2,323,000	\$3,169,000	\$9,734,000
Finance and Insurance	\$8,852,000	\$2,115,000	\$3,652,000	\$14,619,000
Health Care and Social Assistance Information	\$4,420,000	\$1,148,000	\$2,875,000	\$8,443,000
Information	\$7,692,000	\$3,530,000	\$4,155,000	\$15,377,000
Manufacturing	\$9,411,000	\$9,404,000	\$7,383,000	\$26,197,000
Mining	\$13,500,000	\$6,223,000	\$6,219,000	\$25,942,000
Professional, Scientific, and Technical Services	\$6,436,000	\$1,727,000	\$3,918,000	\$12,080,000
Retail Trade	\$3,639,000	\$473,000	\$1,608,000	\$5,721,000
Transportation and Warehousing	\$6,865,000	\$1,994,000	\$3,845,000	\$12,704,000
Utilities	\$25,631,000	\$7,329,000	\$7,575,000	\$40,536,000
Wholesale Trade	\$9,375,000	\$1,199,000	\$3,770,000	\$14,344,000

Note: Not comparable with previous years.

# Economic Impact of Gaining or Losing 100 Jobs: 2003

## Estimated Jobs Created: 2003 Economic Impact of Adding 100 New Jobs in Kentucky

Industrial Sector	Direct	Indirect	Induced	Total
Accommodation and Food Services	100	16	26	142
Agriculture, Forestry, Fishing, and Hunting	100	31	16	147
Arts, Entertainment, and Recreation	100	12	27	140
Construction	100	41	66	207
Finance and Insurance	100	31	76	206
Health Care and Social Assistance	100	22	59	181
Information	100	62	86	248
Manufacturing	100	159	153	412
Mining	100	77	129	305
Professional, Scientific, and Technical Services	100	35	81	216
Retail Trade	100	8	33	141
Transportation and Warehousing	100	36	80	215
Utilities	100	86	157	343
Wholesale Trade	100	21	78	199

Note: Not comparable with previous years.

## Estimated State and Local Taxes: 2003 Created Economic Impact of Adding 100 New Jobs in Kentucky

Industrial Sector	Direct & Indirect	Induced	Total
Accommodation, Food Services	\$ 408,000	\$ 152,970	\$ 560,970
Agriculture, Forestry, Fishing, and Hunting	\$ 132,000	\$ 182,493	\$ 314,493
Arts, Entertainment, Recreation	\$ 381,000	\$ 158,853	\$ 539,853
Construction	\$ 526,000	\$ 380,797	\$ 906,797
Finance and Insurance	\$ 837,000	\$ 439,000	\$ 1,276,000
Health Care and Social Assistance Information	\$ 351,000	\$ 346,000	\$ 697,000
Information	\$ 1,250,000	\$ 500,000	\$ 1,750,000
Manufacturing	\$ 2,243,000	\$ 888,000	\$ 3,131,000
Mining	\$ 3,407,000	\$ 748,000	\$ 4,155,000
Professional, Scientific, and Technical Services	\$ 529,000	\$ 471,000	\$ 1,000,000
Retail Trade	\$ 810,000	\$ 193,000	\$ 1,003,000
Transportation and Warehousing	\$ 795,000	\$ 402,000	\$ 1,197,000
Utilities	\$ 5,553,000	\$ 911,000	\$ 6,464,000
Wholesale Trade	\$ 2,309,000	\$ 453,000	\$ 2,762,000

Notes: Estimates are statewide. Estimates exclude education taxes.

## Economic Impact of Gaining or Losing 100 Jobs: 2003

The maximum value of gaining or losing 100 jobs within the Commonwealth of Kentucky can be estimated by the direct, indirect, and induced economic impacts of that gain or loss on the state's economy.

### **Economic Impacts**

Economic impacts are a mathematical method of specifying the economic relationships among all businesses/industries and between businesses/industries and consumers. Input-output (I/O) modeling is one of the most commonly utilized methods to assess the economic outcomes of job creation or reduction. Economic impact modeling captures the direct impact of an employment expenditure (jobs with wages, salaries, and benefits) on the economy. Additionally, the secondary effect (indirect) on the economy is captured and the consumer based (induced) effects are calculated by the model.

Economic impact analysis typically utilizes an economic model input-output (I/O) which traces the flow of goods and services, income, and employment among related sectors of the economy. The I/O model generates a mathematical depiction of the flow of economic activity. *Id Est*: Final demand changes on the industrial sector producing the good/service (output) purchases inputs from other industrial sectors, which in turn purchase inputs from other sectors. These industrial sectors purchase additional labor inputs. Employees of these industries use their compensation to purchase goods and services from the economy. Linkages between industries in a region create an economic ripple effect as a result of changes in demand for products. Strong linkages can lead to a healthier economy, as capital flows through the economy rather than out of it.

**Direct Effects:** Direct effects are the changes in economic activity during the first round of spending. These represent the impacts (e.g. change in employment) for the expenditures and/or production values specified as direct final demand changes.

**Indirect Effects:** Indirect effects are the changes in sales, income, or employment within the region in backward-linked industries supplying goods and services. These represent the impacts (e.g. change in employment) caused by the iteration of industries purchasing from industries resulting from direct final demand changes. New jobs will be created outside of the primary industry/direct impact industry. Example: Motor vehicle assembly plants purchase goods from automotive parts manufactures.

**Induced Effects:** These represent impacts (e.g. change in employment) on all local industries caused by the expenditures of new household income generated by the direct and indirect effects resulting from direct final demand changes. Induced effects may also reflect government or investment gains. New jobs created in the areas of food services, plumbing, medical/dental care, barbershops, clothing sales, police & fire protection, lawn care, legal services, financial services, real estate, merchandize stores, automobile dealers, & service stations, *et cetera*, are due to the direct and indirect effects of the initial creation of jobs.



## Economic Impact of Gaining or Losing 100 Jobs: 2003

**Value Added:** Indicates the total economic value (impact) attributable to Kentucky's workers and industries. Note: Data consistent with Kentucky's Gross State Product (GSP), not identical.

**Source:** MIG, Inc. 2003 databases and IMPLAN 1997-2003, 2.0.1025 matrices are utilized in the computation of economic impact estimates. All values and estimates are based on 2003 data and dollars. All estimates are NAICS based.

### **Detailed Economic Impact Analysis Reports**

Detailed reports for individual industries and or companies within individual Kentucky counties may be requested by contacting the Kentucky Cabinet For Economic Development—Office of Research and Information Technology, René True—Executive Director (502) 564-4886, extension 3316. Economic impact reports are prepared by Phil Flynn, staff economist.

**The information provided herein by the Division of Research and Site Evaluation -- Cabinet For Economic Development is believed to be accurate but is not warranted and is for informational purposes only. Any estimates, projections, or information provided to make estimates or projections are provided without assurances or warranties and should not be relied upon as fact. Users of the information should perform their own due diligence in drawing conclusions from the information provided.**

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